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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/813,561

Applicant(s)

AHOLAINEN, MARKUS

Examiner

KAN YUEN

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Response to Arguments

1. Applicant's arguments, see remark, filed on 4/17/2008, with respect to the rejection(s) of claim(s) 1-27 under 103 rejections have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Anwald et al. (Pat No.: 7212543), in view of Monroe Pat No.: 6130917.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 22-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Loveland (Pub No.: (2006/0178137).

In claim 22, Loveland disclosed the method of a plurality of home devices adapted to exchange media content in a first format via a first service discovery protocol (Loveland paragraph 0022-0024, fig. 1, device 170a-d). As show in fig. 1, the gateway 130 operates as a bridge between cellular network 120 and a telephone network with multiple individually addressable telephone lines 170 connected to

telephones 180. As for example, device 170d is using 802.11 protocol (first service discovery protocol) to communicate with the gateway 130; at least one mobile device adapted to exchange media content in a second format via a second service discovery protocol (**Loveland paragraph 0022-0024, fig. 1, cell phone 140**). The cellular network comprises a cell phone 140, wherein the cell phone is communicating using a Bluetooth protocol (second service discovery protocol); and a service translation proxy (**fig. 1, gateway 130**) coupled to the plurality of home devices and the at least one mobile device, wherein the service translation proxy is adapted to translate the media exchanged between the plurality of home devices and the at least one mobile device in response to their respective capabilities via the respective first and second service discovery protocols (**Loveland paragraph 0014, 0022-0024, fig. 1, cell phone 140**). The gateway operates as a bridge between the cellular network and a telephone network to provide signals translation between the two networks.

Regarding claim 23, Loveland disclosed the service translation proxy is coupled to the plurality of home devices and the at least one mobile device via a proximity connection (**Loveland paragraph 0022-0024, fig. 1, cell phone 140**).

Regarding claim 24, Loveland disclosed the proximity connection includes a Bluetooth connection (**Loveland paragraph 0022-0024, fig. 1, cell phone 140**).

4. Claim 28 is rejected under 35 U.S.C. 102(e) as being anticipated by Arwald et al. (Pat No.: 7212543).

In claim 28, Arwald et al. disclosed the method of a network interface (**Arwald et al. fig. 2, central controller 35**) capable of communicating with a service requestor (fig. 2, objects 21) via a first service discovery protocol and at least service provider (**fig. 2, network 21-29**) a second service discovery protocol (**Arwald et al. column 12, lines 11-60**). The different objects then receive information from the central controller 35, regarding how the adapters associated with each of the objects, should convert the native protocol (first service discovery protocol) into a mutually agreeable protocol (second service discovery protocol);

a processor (**fig. 2, router 39**) coupled to the network interface; and
memory (**fig. 2, data base 37**) coupled to the processor,
wherein the memory includes instructions that cause the processor to:
receive a service request from the service requestor (**Arwald et al. column 12, lines 11-60**);

translate the service request from the first service discovery protocol to the second service discovery protocol (**Arwald et al. column 12, lines 11-67, column 13, lines 1-15**). The different objects then receive information from the central controller 35, regarding how the adapters associated with each of the objects, should convert the native protocol (first service discovery protocol) into a mutually agreeable protocol (second service discovery protocol);

locate the service provider to provide the service requested via the second service discovery protocol and translate the service provided into a format that is compatible with capability information associated with the service requestor as determined by the first and second service discovery protocols (**Arwald et al. column 12, lines 11-67, column 13, lines 1-15**). The calling object sends a query to the central controller 35 via a predetermined protocol, after which the central controller 35 consults with the database 37 and determines which services are needed. The central controller 35 then determines which objects are to be activated, and consults with the object to be activated so as to assure a link can be established at that particular time. When the connection is established, the central controller 35 informs the adapters associated with the calling object and the called object to communicate using a certain predetermined protocol, and only if necessary, is the router 39 interjected for performing an active translation role between the protocol employed by the calling object and the protocol employed by the called object.

Claim Rejections - 35 USC § 103

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

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3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arwald et al. (Pat No.: 7212543), in view of Monroe (Pat No.: 6130917).

For claim 1, Arwald et al. disclosed the method of determining the protocol of a service discovery request received from a client (**Arwald et al. column 10, lines 1-65, column 12, lines 11-67, column 13, lines 1-15**). The protocol coordinator 45 upon receiving a particular request for establishing a communication link between one object and another, may rapidly analyze the candidate protocols and determine the most effective protocol to which to direct the different adapters used by the objects for making the communication link;

translating the protocol of the service discovery request into a service discovery protocol used by a service registry, the translated service discovery request being used to discover a service provider of the service requested (**Arwald et al. column 10, lines 1-65, column 12, lines 11-67, column 13, lines 1-15**). The protocol coordinator 45 will identify the protocols that are within the vocabulary of the different objects under consideration, so that the resulting protocols employed during the communication session, places the minimum translation burden on the router 39.

However, Arwald et al. did not teach the feature of detecting incompatibilities between the client and the service provider and translating the service provided to the client by the service provider in response to the detected incompatibilities.

Monroe from the same or similar fields of endeavor teaches the feature of detecting incompatibilities between the client and the service provider and translating the service provided to the client by the service provider in response to the detected incompatibilities (**Monroe column 2, lines 27-67**). The compatibility of the source data format and the destination data format is determined. Where required, the source data is converted to a compatible data format, and transmission is initiated using a protocol compatible with the destination system.

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the feature as taught by Monroe in the network of Arwald et al. The motivation for using the feature as taught by Monroe in the network of Arwald et al. being that it increases transmission efficiency.

For claim 2, Arwald et al. disclosed the feature of translating the protocol includes selecting one of a plurality of service discovery interfaces that are compatible with the service registry (**Arwald et al. column 10, lines 1-65, column 12, lines 11-67, column 13, lines 1-15, fig. 2**). When an appropriate object/interface is selected, the router 39 will initiate the transmission.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arwald et al. (Pat No.: 7212543), in view of Monroe (Pat No.: 6130917), as applied to claim 2 above, and further in view of Klaghofer et al. (Pub No.: 2003/0048855).

For claim 3, Arwald et al. and Monroe both did not teach the number of service discovery interfaces is programmable. Klaghofer et al. from the same or similar fields of endeavor teaches the method of the number of service discovery interfaces is programmable (see paragraph 0021, lines 1-6). Thus, it would have been obvious to the person or ordinary skill in the art at the time of the invention to use the feature as taught by Klaghofer et al. in the network of Arwald et al. and Monroe. The motivation for using the feature as taught by Klaghofer et al. in the network of Arwald et al. and Monroe, being that it provides various programmable functions in devices to perform conversion.

9. Claim 4-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arwald et al. (Pat No.: 7212543), in view of Monroe (Pat No.: 6130917), as applied to claim 1 above, and further in view of Sylvain (Pub No.: 2004/0120498).

For claim 4, Arwald et al. and Monroe both did not teach the feature of detecting the incompatibilities comprises analyzing session descriptions contained within Session Initiation Protocol (SIP) messages exchanged between the client and the service provider. Sylvain from the same or similar fields of endeavor teaches the feature of detecting the incompatibilities comprises analyzing session descriptions contained

within Session Initiation Protocol (SIP) messages exchanged between the client and the service provider (**Sylvain paragraph 0033**). Thus, it would have been obvious to the person or ordinary skill in the art at the time of the invention to use the feature as taught by Sylvain in the network of Arwald et al. and Monroe. The motivation for using the feature as taught by Sylvain in the network of Arwald et al. and Monroe, being that it provides accuracy in the transmission system.

Regarding claim 5, Sylvain disclosed the session descriptions transmitted by the client reflects the capabilities of the client (**Sylvain paragraph 0033**).

Regarding claim 6, Monroe disclosed the capabilities of the client include media session capabilities (**Monroe see column 4, lines 27-40 and see fig. 1**). The reference supports audio signal, which is the media session.

Regarding claim 7, Monroe disclosed the session descriptions transmitted by the service provider reflects the capabilities of the service provider (**Monroe see column 4, lines 45-55, and see fig. 1**). In the reference, the system selects the proper conversion technique based on the detection of incompatibilities.

Regarding claim 8, Monroe disclosed the capabilities of the service provider include media session capabilities (**Monroe see column 4, lines 27-40**). The reference supports audio signal, which is the media session.

Regarding claim 9, Monroe disclosed the feature of translating the service provided comprises translating media received from the service provider into a format compatible with the media session capabilities of the client (**Monroe see column 4, lines 27-40**). The reference originates an audio signal from the source, and since the

system can initiates conversion at the source or destination, so therefore in this case, the system converts the destination data format to comply with the audio signal generated from the source.

Regarding claim 10, Monroe disclosed modifying the session descriptions received from the client to match the session descriptions received from the service provider; and transmitting the modified session descriptions to the service provider **(Monroe see column 2, lines 27-50, and see column 4, lines 27-67)**. As shown in the reference, the conversion can be done at source or destination endpoints, depending on application requirement.

Regarding claim 11, Monroe disclosed the feature of modifying the session descriptions received from the service provider to match the session descriptions received from the client; and transmitting the modified session descriptions to the client **(Monroe see column 2, lines 27-50, see column 4, lines 45-55)**. In the reference, the system selects the proper conversion technique based on the detection of incompatibilities, which can be interpreted as analyzing session description. As shown in the reference, the system can initiates conversion at the source or destination.

Regarding claim 12, Monroe disclosed the feature of translating the service provided comprises: receiving messages from the service provider using a first transport protocol; and transmitting the messages received from the service provider to the client using a second transport protocol **(Monroe see column 2, lines 27-50)**. As shown, the source originates a data format, which is the first protocol, and then conversion takes

place at the source to change the data format at the source to comply with the destination data format, which is the second protocol.

Regarding claim 13, Monroe disclosed the feature of translating the service provided comprises: receiving messages from the client using the second transport protocol; and transmitting the messages received from the client to the service provider using the first transport protocol (**Monroe see column 2, lines 27-50**). As shown, the source originates a data format, which is the first protocol, and then conversion takes place at the destination to change the data format at the destination to comply with the source data format, which is the second protocol.

10. Claims 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eytchison (Pub No.: 2005/0160172), in view of Parsons et al. (Pat No.: 6310889).

For claim 14, Eytchison teaches the method of a service requestor (**fig. 4 device 132**) coupled to the service translation system (**fig. 4, Bridge 70**) and adapted to submit a service request using a first protocol (**Eytchison paragraphs 0053-0054, 0059, fig. 4**). A device 132 within the UPnP network or the rendezvous network first discovers the devices within the other network. The discovering device then sends a communication to the UPnP rendezvous bridge requesting information about the device using UPnP (XML) protocol or the first protocol;

a service translation proxy (**fig. 4, Rendezvous proxy 114 and UPnP proxy 112**) coupled to the service requestor and adapted to translate the first protocol of the service request into a second protocol (**paragraphs 0052-0055, fig. 4**). The UPnP bridge 70 includes the UPnP proxy 112, the UPnP table 116, the rendezvous proxy 114 and the rendezvous table 118. When a new UPnP device is added in the UPnP network, this new device is discovered by the UPnP proxy 112. The information for the new device discovered by the UPnP proxy 112 is then passed to the rendezvous proxy 114. Using this information, the rendezvous proxy 114 generates a device record in DNS for the new UPnP device, thus the bridge can convert DNS or XML format or protocol vice-versa, wherein the DNS is the second protocol.

However, Eytchison did not disclose the feature of a service provider coupled to the service translation system and adapted to provide the service requested, wherein the service translation proxy is further adapted to translate the service provided into a format that is compatible with the service requester. Parsons et al. from the same or similar fields of endeavor teaches the feature of a service provider (**fig. 2, region server 24**) coupled to the service translation system (**Parsons et al. fig. 2, transducers 46 and switch 48**) and adapted to provide the service requested, wherein the service translation proxy is further adapted to translate the service provided into a format that is compatible with the service requester (**column 3, lines 60-67, column 4, lines 1-13**). The data stream conversion system comprising set 44 of transducers 46 and a transducer matrix switch 48 to convert data streams between various formats,

protocols and standards, wherein the data stream can be various kind of services such as email, internet or fax.

Thus, it would have been obvious to the person or ordinary skill in the art at the time of the invention to use the feature as taught by Parsons et al. in the network of Eytchison. The motivation for using the feature as taught by Parsons et al. in the network of Eytchison, being that it provides accuracy in the transmission system.

Regarding claim 15, Eytchison disclosed the service translation proxy comprises a programmable number of service discovery protocol interfaces (**Eytchison fig. 3, UPnP I/F 72 and Rendezvous I/F 74**).

Regarding claim 16, Eytchison disclosed a service registry (**Rendezvous fig. 4, table 118 and UPnP table 116**) coupled to receive the service request in the second protocol, wherein the service request is transmitted by one of the programmable number of service discovery protocol interfaces (**Eytchison paragraphs 0052-0053**).

Regarding claim 17, Eytchison disclosed the means for receiving a service request from a service requester (**fig. 4 device 132 (Eytchison paragraphs 0053-0054, 0059, fig. 4)**). A device 132 within the UPnP network or the rendezvous network first discovers the devices within the other network. The discovering device then sends a communication to the UPnP rendezvous bridge requesting information about the device using UPnP (XML) protocol or the first protocol;

means for translating the service request from a first protocol to a second protocol (Eytchison paragraphs 0052-0055, fig. 4). The UPnP bridge 70 includes the UPnP proxy 112, the UPnP table 116, the rendezvous proxy 114 and the rendezvous

table 118. When a new UPnP device is added in the UPnP network, this new device is discovered by the UPnP proxy 112. The information for the new device discovered by the UPnP proxy 112 is then passed to the rendezvous proxy 114. Using this information, the rendezvous proxy 114 generates a device record in DNS for the new UPnP device, thus the bridge can convert DNS or XML format or protocol vice-versa, wherein the DNS is the second protocol;

means for locating a service provider to provide the service requested (paragraphs 0053-0055). When the bridge locates a new UPnP device and service that is added in the UPnP network, this new device is discovered by the UPnP proxy 112; and means for translating the service provided into a format that is compatible with capability information associated with the service requester.

However, Eytchison did not disclose the feature of means for translating the service provided into a format that is compatible with capability information associated with the service requester. Parsons et al. from the same or similar fields of endeavor teaches the feature of means for translating the service provided into a format that is compatible with capability information associated with the service requester (**Parsons et al. fig. 2, transducers 46 and switch 48**) and adapted to provide the service requested, wherein the service translation proxy is further adapted to translate the service provided into a format that is compatible with the service requester (column 3, lines 60-67, column 4, lines 1-13). The data stream conversion system comprising set 44 of transducers 46 and a transducer matrix switch 48 to convert data streams

between various formats, protocols and standards, wherein the data stream can be various kind of services such as email, internet or fax.

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the feature as taught by Parsons et al. in the network of Eytchison. The motivation for using the feature as taught by Parsons et al. in the network of Eytchison, being that it provides accuracy in the transmission system.

Regarding claim 18, Eytchison disclosed the means for receiving the service provided using a first transport protocol and means for providing the service provided using a second transport protocol (**Eytchison paragraphs 0052-0055, fig. 4**). The UPnP bridge 70 includes the UPnP proxy 112, the UPnP table 116, the rendezvous proxy 114 and the rendezvous table 118. When a new UPnP device is added in the UPnP network, this new device is discovered by the UPnP proxy 112. The information for the new device discovered by the UPnP proxy 112 is then passed to the rendezvous proxy 114. Using this information, the rendezvous proxy 114 generates a device record in DNS for the new UPnP device, thus the bridge can convert DNS (second protocol) or XML (first protocol) format or protocol vice-versa;

Claim 19 is rejected similar to claim 17.

Regarding claim 20, Eytchison disclosed the locating a service provider comprises issuing the translated service request to a service registry (**Eytchison paragraphs 0052-0055, fig. 4**). The XML device record for the new rendezvous device is then stored in the UPnP table 116.

11. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eytchison (Pub No.: 2005/0160172), in view of Parsons et al. (Pat No.: 6310889), as applied to claim 19 above, and further in view of Keenan et al. (Pub No.: 2004/0208164).

For claim 21, Eytchison and Parsons et al. both did not disclose the feature of locating a service provider comprises forwarding the service request to another service translation proxy located within the network. Keenan et al. from the same or similar fields of endeavor teaches the feature of locating a service provider comprises forwarding the service request to another service translation proxy located within the network (**Keenan et al. paragraph 0060**). Thus, it would have been obvious to the person or ordinary skill in the art at the time of the invention to use the feature as taught by Keenan et al. in the network of Eytchison and Parsons et al. The motivation for using the feature as taught by Keenan et al. in the network of Eytchison and Parsons et al., being that it provides accuracy in the transmission system.

12. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arwald et al. (Pat No.: 7212543), in view of Monroe (Pat No.: 6130917).

For claim 25, Loveland disclosed the method of establishing the mobile device and the home device as entities of a wireless home network, wherein the mobile device

communicates via a first service discovery protocol and the second device communicates via a second service discovery protocol (**Loveland paragraph 0022-0024, fig. 1, device 170a-d and cell phone 140**). As show in fig. 1, the gateway 130 operates as a bridge between cellular network 120 and a telephone network with multiple individually addressable telephone lines 170 connected to telephones 180. As for example, device 170d is using 802.11 protocol (first service discovery protocol) to communicate with the gateway 130. The cellular network comprises a cell phone 140, wherein the cell phone is communicating using a Bluetooth protocol (second service discovery protocol);

translating media exchanged between the mobile device and the home device in response to the media capability differences between the mobile device and the home device (**Loveland paragraph 0022-0024**).

Arwald et al. from the same or similar fields of endeavor teaches the feature of evaluating differences in media capabilities between the mobile device and the home device via the respective first and second service discovery protocols (**Arwald et al. column 10, lines 1-35**). The protocol coordination mechanism 45, upon receiving a particular request for establishing a link between one object and another, it may rapidly analyze the candidate protocols and determine the most effective protocol to which to direct the different adapters used by the objects for making the communication link.

Thus, it would have been obvious to the person or ordinary skill in the art at the time of the invention to use the feature as taught by **Arwald et al.** in the network of

Loveland. The motivation for using the feature as taught by Arwald et al. in the network of Loveland, being that it provides accuracy in the transmission system.

Regarding claim 26, Arwald et al. disclosed the feature of automatically determining the media format capability of the mobile device using a service translation proxy and automatically determining the media format capability of the home device using the service translation proxy (**Arwald et al. column 10, lines 1-35**). The protocol coordination mechanism 45 keeps track of the different protocols employed by the different objects 21, 33. Upon receiving a particular request for establishing a link between one object and another, it may rapidly or automatically analyze the candidate protocols and determine the most effective protocol to which to direct the different adapters used by the objects for making the communication link.

Regarding claim 27, Loveland disclosed the feature of translating the media format received from the home device into media format that is compatible with the media format capability of the mobile device and translating the media format received from the mobile device into media format that is compatible with the media format capability of the home device (**Loveland paragraph 0014, 0022-0024**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAN YUEN whose telephone number is (571)270-1413. The examiner can normally be reached on Monday-Friday 10:00a.m-3:00p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky O. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ricky Ngo/
Supervisory Patent Examiner, Art
Unit 2616

KY